Office Action Dated: March 8, 2007

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

This listing of claims will replace all prior versions, and listings, of claims in the application. Listing of Claims:

1. (withdrawn) A compound of formula I:

wherein:

is

R¹ and R² are each independently alkyl or -(alkylene)-epoxyethyl;

R³ is alkyl, aralkyl, or aryl, wherein said alkyl, aralkyl or aryl is optionally substituted with 0-5 Z;

R⁴ and R⁵ are each independently H, alkyl, or aryl, wherein said alkyl or aryl optionally substituted with 0-5 Z;

R⁶ is H, alkyl, aryl or aralkyl;

Z is:

R⁷ and R⁸ are each independently H, alkyl, or aryl;

R⁹ and R¹⁰ are each independently alkyl or -(alkylene)-epoxyethyl;

j is the integer 0 or 1;

n is a number in the range from about 0.8Y to about Y; and

Y is the number of amine nitrogen atom equivalents in said compound;

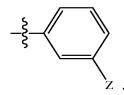
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provided that at least two of R¹, R², R⁹ and R¹⁰ are -(alkylene)-epoxyethyl.

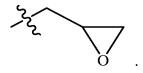
2. (withdrawn) The compound of claim 1, wherein \mathbb{R}^3 is phenyl, optionally substituted with

0-5 Z.

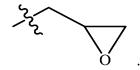
3. (withdrawn) The compound of claim 1, wherein R^3 is:



- 4. (withdrawn) The compound of claim 1, wherein R^7 and R^8 are each H and wherein Z is $-CH_2NR^9R^{10}$.
- 5. (withdrawn) The compound of claim 4, wherein at least two of R^1 , R^2 , R^9 , and R^{10} are:



6. (withdrawn) The compound of claim 4, wherein each of R^1 , R^2 , R^9 , and R^{10} is:



- 7. (withdrawn) The compound of claim 1, wherein said compound is substantially water soluble.
- 8. (withdrawn) The compound of claim 1, wherein R^3 is cyclohexyl.

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9. (withdrawn) The compound of claim 1, wherein -(alkylene)-epoxyethyl is:

10. (withdrawn) A compound of formula II:

wherein:

R¹ and R² are each independently alkyl or -(alkylene)-epoxyethyl;

R³ is alkyl, aralkyl, or aryl, wherein said alkyl, aralkyl or aryl is optionally substituted with 0-5 Z;

 R^4 and R^5 are each independently H, alkyl, or aryl, wherein said alkyl or aryl optionally substituted with 0-5 Z;

R⁶ is H, alkyl, aryl or aralkyl;

Z is:

$$R^{7}
R^{8}$$

$$R^{9}$$

$$R^{10}$$

$$R^{6}$$

$$R^{6}$$

R⁷ and R⁸ are each independently H, alkyl, or aryl;

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R⁹ and R¹⁰ are each independently alkyl or -(alkylene)-epoxyethyl;

j is the integer 0 or 1;

provided that at least two of R¹, R², R⁹ and R¹⁰ are -(alkylene) epoxyethyl.

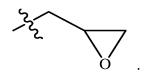
- 11. (withdrawn) The compound of claim 10, wherein R^3 is phenyl, optionally substituted with 0-5 Z.
- 12. (withdrawn) The compound of claim 10, wherein R³ is:

13. (withdrawn) The compound of claim 10, wherein Z is:

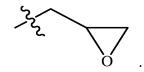
and wherein R⁷ and R⁸ are each H.

14. (withdrawn) The compound of claim 13, wherein at least two of R^1 , R^2 , R^9 , and R^{10} are:

15. (withdrawn) The compound of claim 13, wherein each of R^1 , R^2 , R^9 , and R^{10} is:



- 16. (withdrawn) The compound of claim 10, wherein said compound is substantially water soluble.
- 17. (withdrawn) The compound of claim 10, wherein R³ is cyclohexyl, wherein said cyclohexyl is optionally substituted with 0-3 Z.
- 18. (withdrawn) The compound of claim 10, wherein -(alkylene)-epoxyethyl is:



- 19. (withdrawn) The compound of claim 10, wherein said compound is substantially water soluble.
- 20. (Currently amended) A polyepoxy resin composition comprising:

water; and

a polyepoxy resin composition comprising

a compound of formula III:

$$R^1$$
 N
 $(alkylene)_j$
 R^3
 R^2
 R^5

wherein:

 R^1 and R^2 are each independently alkyl or -(alkylene)-epoxyethyl;

R³ is alkyl, aralkyl, or aryl, wherein said alkyl, aralkyl or aryl is optionally substituted with 0-5 Z;

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R⁴ and R⁵ are each independently H, alkyl, or aryl, wherein said alkyl or aryl is optionally substituted with 0-5 Z;

Z is:

$$R^9$$
 R^{10}
 R^7
 R^8

R⁷ and R⁸ are each independently H, alkyl, or aryl;

R⁹ and R¹⁰ are each independently alkyl or -(alkylene)-

epoxyethyl, provided that at least two of R¹, R², R⁹ and R¹⁰ are -(alkylene) epoxyethyl;

j is the integer 0 or 1; and

water; and

a carboxylic acid;

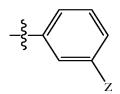
wherein the carboxylic acid is HCO₂H or alkyl-CO₂H, said alkyl optionally substituted with halo, alkoxy, monohaloalkoxy, polyhaloalkoxy, alkyl, aralkyl, aryl, hydroxyl (-OH), nitro (-NO₂), cyano (-CN), sulfonyl (-SO₂R⁴), sulfamoyl (-SO₂NR⁵R⁶), or amino (-NH₂, NHR⁵, NHR⁶, N(R⁵R⁶);

provided that at least two of R¹, R², R⁹ and R¹⁰ are (alkylene) epoxyethyl wherein the polyepoxy resin composition is substantially water soluble.

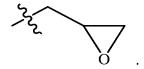
- 21. (original) The composition of claim 20, wherein the ratio of carboxylic acid equivalents to amine equivalents of the compound of formula III is at least about 0.8.
- 22. (original) The composition of claim 21, wherein said ratio is within the range of about 0.8 to about 5.

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- 23. (original) The composition of claim 21, wherein said ratio is within the range of about 0.8 to about 2.
- 24. (original) The composition of claim 21, wherein said ratio is within the range of about 0.8 to about 1.5.
- 25. (original) The composition of claim 20, wherein said aryl is:

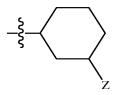


wherein R^7 and R^8 are each H, wherein Z is -CH₂NR⁹R¹⁰, and wherein each of R^1 , R^2 , R^9 , and R^{10} is:



26-29. (cancelled).

30. (previously presented) The composition of claim 22, wherein R^3 is:



- 31. (Currently amended) A coating produced from a mixture comprising: the polyepoxy resin composition of claim 20; and a curative.
- 32. (original) The coating produced of claim 31, wherein said carboxylic acid is acetic acid.

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33. (original) The coating produced of claim 31, wherein the compound of formula III of said polyepoxy resin is:

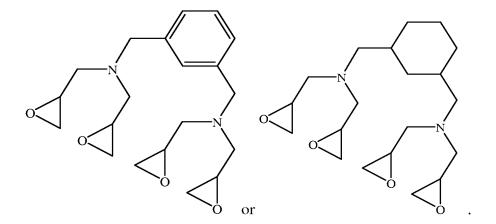
34. (original) The coating produced of claim 33, wherein said formula III compound is:

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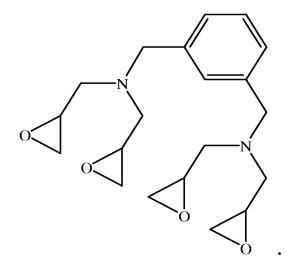
35. (original) The coating produced of claim 33, wherein said formula III compound is:

- 36. (original) The coating produced of claim 34, wherein said carboxylic acid is acetic acid.
- 37. (Currently amended) A kit for forming a coating produced from a mixture comprising the polyepoxy resin composition of claim 20.
- 38. (cancelled).
- 39. (original) The kit of claim 37, further comprising a curative.
- 40. (original) The kit of claim 37, wherein the carboxylic acid is acetic acid.
- 41. (original) The kit of claim 37, wherein the compound of formula III is:

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42. (original) The kit of claim 41, wherein said formula III compound is:



43. (original) The kit of claim 41, wherein said formula III compound is:

- 44. (withdrawn) A method for making a polyepoxy resin water soluble, comprising: contacting said resin with a carboxylic acid.
- 45. (withdrawn) The method of claim 44, wherein said carboxylic acid is water soluble.
- 46. (withdrawn) The method of claim 44, wherein said carboxylic acid is acetic acid.
- 47. (withdrawn) A compound of formula IIA:

$$R^{7}$$
 R^{8}
 R^{7}
 R^{8}
 R^{10}
 R^{10}
 R^{10}
 R^{10}
 R^{10}
 R^{10}
 R^{10}

wherein:

t is 1, 2, 3, 4, 5, or 6;

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t' is 1, 2, 3, 4, 5, or 6;

R⁷, R⁷, R⁸, and R⁸ are each independently H, alkyl, or aryl;

 R^9 , $R^{9'}$, R^{10} , and $R^{10'}$ are each independently alkyl or -(alkylene)-epoxyethyl; and Z is the anion of a weak acid.

- 48. (withdrawn) The compound of claim 47, wherein R^7 , R^7 , R^8 , and R^8 are each H, and t and t' are each 1.
- 49. (withdrawn) The compound of claim 47 wherein the six-membered ring is metasubstituted.
- 50. (withdrawn) The compound of claim 47 wherein the six-membered ring is phenyl.
- 51. (withdrawn) The compound of claim 47 wherein the weak acid is acetic acid.